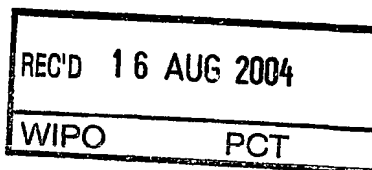


PCT/NZ2004/000164



## CERTIFICATE

This certificate is issued in support of an application for Patent registration in a country outside New Zealand pursuant to the Patents Act 1953 and the Regulations thereunder.

I hereby certify that annexed is a true copy of the Provisional Specification as filed on 6 August 2003 with an application for Letters Patent number 527406 made by MICHAEL ALEXANDER SMITH and CAROLYN YNDRA SMITH.

I further certify that pursuant to a claim under Section 24(1) of the Patents Act 1953, a direction was given that the application proceed in the name of VISI-BAND FENCING SYSTEMS LIMITED.

Dated 30 July 2004.

**PRIORITY DOCUMENT**  
SUBMITTED OR TRANSMITTED IN  
COMPLIANCE WITH  
RULE 17.1(a) OR (b)

A handwritten signature in cursive script that reads "Neville Harris".

Neville Harris  
Commissioner of Patents, Trade Marks and Designs



**Provisional Specification**

New Zealand Patents Act 1953

**Title:** *Must be the same as the title on the Application for Patents (Patents form 1)*

SMITH'S "VISI-BAND" FENCE

**Applicant:** *State (in full) name, address, and nationality of applicant or applicants***I/We** MICHAEL ALEXANDER SMITH

or CAROLYN YNDRA SMITH

**Address** R.D. ONGARUE STREAM ROAD,  
WAIMIHA, TAUMAEKUNU.**Nationality** M.A. SMITH - BRITISH (NZ RESIDENT), C.Y. SMITH - NEW ZEALANDdo hereby declare this invention to be described in the following statement: *(continue application on page 2)*

Please submit this form with the Application for Patent (Patents Form 1)

INTELLECTUAL PROPERTY  
OFFICE OF N.Z.

- 6 AUG 2003

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# Application for Patent

New Zealand Patents Act 1953

THIS FORM SHOULD BE ACCOMPANIED BY A COPY OF EITHER A PROVISIONAL SPECIFICATION (PATENTS FORM 4)  
OR A COMPLETE SPECIFICATION (PATENTS FORM 5). IF THE APPLICATION IS MADE BY THE INVENTOR FILL OUT ONLY SECTIONS 1, 4, AND 6 OF THIS FORM

1. Applicant State (in full) name, address, and nationality of applicant(s)

I/We MICHAEL ALEXANDER SMITH

& CAROLYN YNDRA SMITH

Address R.D. ONGARUE STREAM ROAD,  
WAIMIHA, TAUMAPUNUI

Nationality M. A. SMITH - BRITISH (NZ RESIDENT), C.Y. SMITH - NEW ZEALAND

am/are in possession of an invention which is described in the accompanying (provisional/complete (delete one))  
specification under the title Insert title of invention

SMITH'S "VISI-BAND" FENCE

I/We/The said claim(s) to be the true and first inventor(s) of the invention. Or—

2. I/We believe name, address, and nationality of inventor(s) if different to the applicant

to be the true and first inventors of the invention, and I/we/the said am/are the assignee(s) of the said inventor(s)  
in respect of the right to make this application (or personal representative(s) of the said inventor(s)).

3. (Complete this section only if the invention was communicated from abroad) The invention or a part of the invention was  
communicated from abroad to me/us by Insert name, address, and nationality of communicator

4. I/We declare that to the best of my/our knowledge and belief the statements made above are correct and there is no  
lawful ground of objection to the grant of a patent to me/us on this application, and I/we pray that a patent may be  
granted to me/us for the said invention.

Note: Use of the invention in New Zealand before the date of the application for a patent may be a lawful ground of objection.

5. (Complete this section only if a patent of addition is applied for) And I/we request that the patent may be granted as a  
patent of addition to patent No. \_\_\_\_\_ Insert the number accorded the granted patent or the patent to be  
granted on application No. \_\_\_\_\_ Insert the number accorded the provisional application or complete specification

6. And I/we request that all notices, requisitions, and communications relating to this application may be sent to Insert  
name and address

M. A. & C. Y. SMITH, R.D. ONGARUE STREAM ROAD,  
WAIMIHA, TAUMAPUNUI.

who is/are hereby appointed to act for me/us

If the address given in section 6 is not in New Zealand, please provide an address for service in New Zealand

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- 6 AUG 2003

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Applicant(s) signature(s)

*[Signature]*  
5/8/03

Telephone contact or e-mail

07/8945857  
smith.waimiha@xtra.co.nz

SMITH'S

527406

"VISI-BAND" Fence.

Traditional wire and batten fences have served the farming industry for over 100 years. However they have two inherent weaknesses.

Firstly wire fences offer little visible barrier to stock and as a result stock constantly challenge them damaging themselves and the fences.

Secondly they require a high level of skill to correctly erect and are relatively time consuming. This results in a high proportion of labour cost in the total expense.

The Smith's "VISI-BAND" fence is designed to overcome these two deficiencies

It uses wide steel bands to produce a strong barrier with high visual impact on stock and is intended to complement existing farm fencing options.

Its primary use is in pressure movement areas where stock is consolidated prior to entering holding yards/pens.

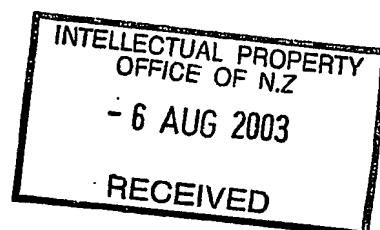
SMITH'S "VISI-BAND" fence therefore provides an effective link between traditional wire and batten fences and timber yards.

It can be mounted on existing posts stripped of wire and batten or established from new.

Its cost is directly comparable to wire and batten by significantly shifting the cost of labour into materials with its easy to erect design.

It is best suited to land contour that is flat to gently undulating. (Bands can be crimped to follow land movement of a moderate amount.)

Materials specification will ensure at least a 25yr working life.



**DESIGN DETAIL- ( see drawings- Steel band, Stanchion post, Stabiliser, End clamp and Joiner)**

**Steel band -**

A wide diameter steel strip provisionally designated at 80mm (but may vary for different types of stock) is used in much the same way as wire in a high tensile fence. It is of a light gauge delivered in a roll for dispensing off a spinning jenny. The band is manufactured to a high corrosion resistant specification . " It will be available in a white finish on both sides and other colours dependant upon demand

Unlike wire it will not require to be strained only made taut.

**Stanchion post -**

This press formed steel strip nails directly to the tanilised post. It is pre slotted for the steel strips (5 for sheep). The fencer is therefore not required to measure and mark each post. When the bands have been properly located the retaining tabs are bent over and nailed to the tanilised post thereby stressing the bands at each stanchion.

**Stabiliser-**

This is used much like a batten but normally only one at the mid point of the posts. It is of a two piece design, one part of flat pressed metal of a heavier gauge than that used for the bands; the other piece a locking strip that drives down through slots to permanently locate the bands at their designated spaces. The strip is pinned top and bottom.

It may be beneficial to use additional stabilisers in those sections adjoining gateways.

**End Clamp -**

This is used to securely attach the end of the band to the starting and finishing post. It is a heavy gauge galvanised slotted plate with a gangnail profile which receives the end of the band folds it under the plate and reverses the bands direction through another slot. The End clamp is then driven into the tanilised post. The clamp is radiused for a 200mm post.

**Joiner:-**

Used for butt jointing two bands.

A wide slotted clip with a locking plate clamps the overlapping bands which have been folded in thereby creating extra thickness that cannot pass through the slot.

## TOOLS

(\* Special tools required to erect the SMITH'S "VISI-BAND" Fence.- Not part of patent application ; included to explain erection process. ).

1/ tin snips with a cut length greater than 80mm.

2/ metal strip folder - for attaching end clamps and joiners. Widemouth pliers with >80mm grip for "front-on" application.

\* 3/ low-pressure tensioner for achieving required tautness throughout the length of the band. Mounts horizontally on end post at each band level to tension band around post in preparation for fitting end clamp.

\*4/ a "V" crimping tool for adjusting the band angle where there is undulation in the land contour. Applied to the slack edge ( inside angle ).

\*5/ a parallel crimper for removing any slack in the band after installation or later damage repair.

6/ pinning tool for fastening top and bottom of Spreader.

## METHOD OF ERECTION.

- 1/ Erect tanilised posts at 4m intervals
  - 2/ Nail stanchion posts to tanilised post. Foot of stanchion goes to ground level —no measuring required.
  - 3/ roll out first band
  - 4/ Secure first band to starting post (around inside ) using end clamp having folded 50mm tongue to receive into clamp.
  - 5/ Feed band into stanchion post slot down length of fence, tapping over top nailing bracket to hold band in position,
  - 6/ Apply low pressure strainer , tighten band , secure temporarily with nail , fit end clamp and secure permanently.
  - 7/ Repeat for other bands.
  - 8/ When all bands mounted , tensioned and secured but before final nailing use V crimp tool to adjust band tensions where there is movement above or below the horizontal. The crimp is applied to the "slack" edge of the band i.e.the inside angle to remove the buckle and to tighten the band.
  - 9/ Nail down all securing slots on stanchion posts ( through bands) using a heavy gauge nail.
  - 10/ Fit one Stabiliser to the mid point of each post to post section.
- ( the parallel crimper is only for removing slack from damaged fence)

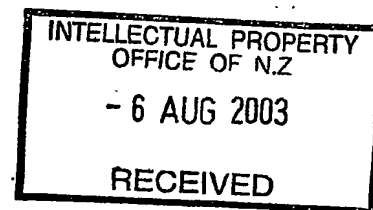


## FUTURE DEVELOPMENT

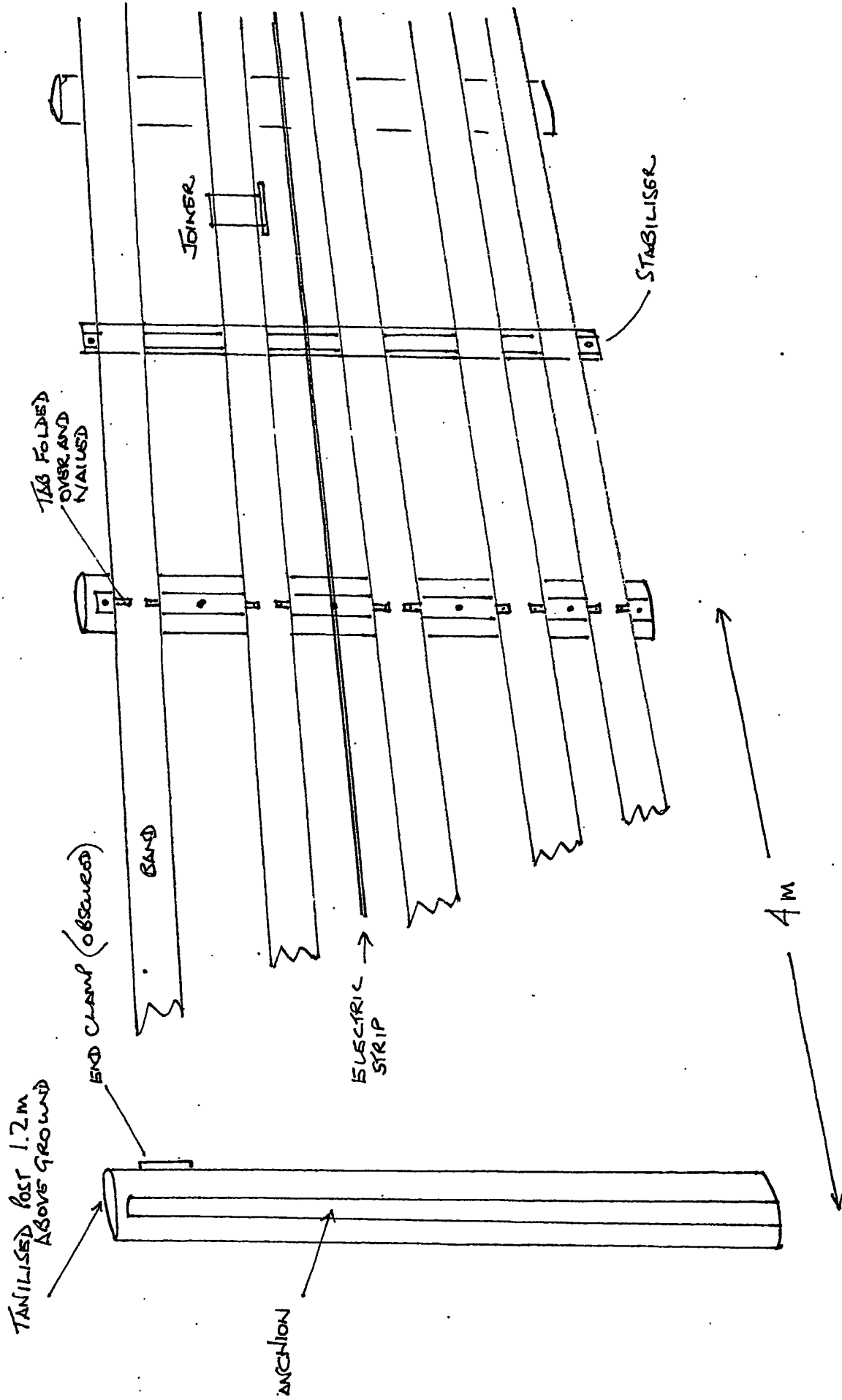
Variations to height and strength to accommodate different stock options eg Deer.

Electrification option to provide additional stock retention.

Colour options to highlight use of electricity or to meet specific purchaser's requirements ( eg lifestyle blocks )

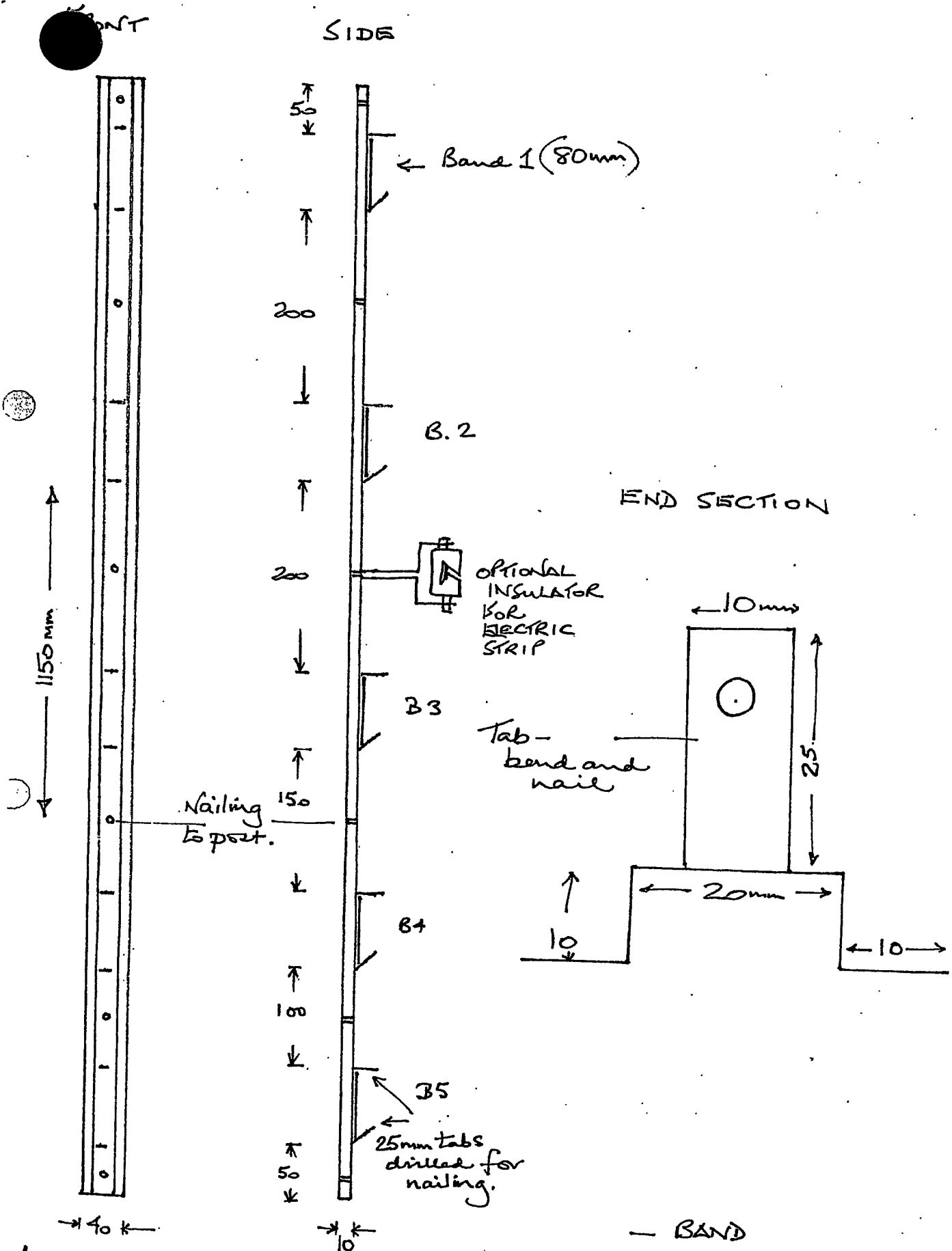






SMITH'S "VISI-BAND" FENCE

# STANCHION POST.



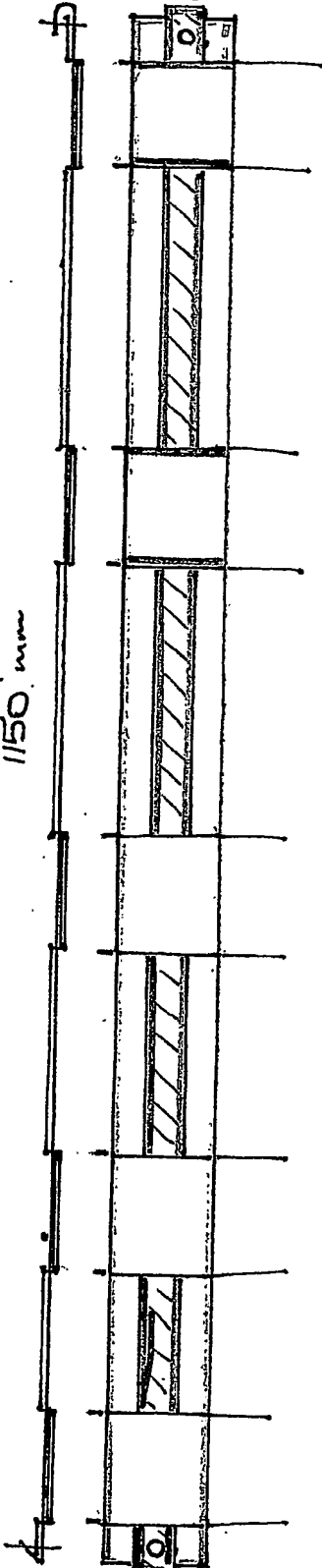
# STABILISER

SIDE

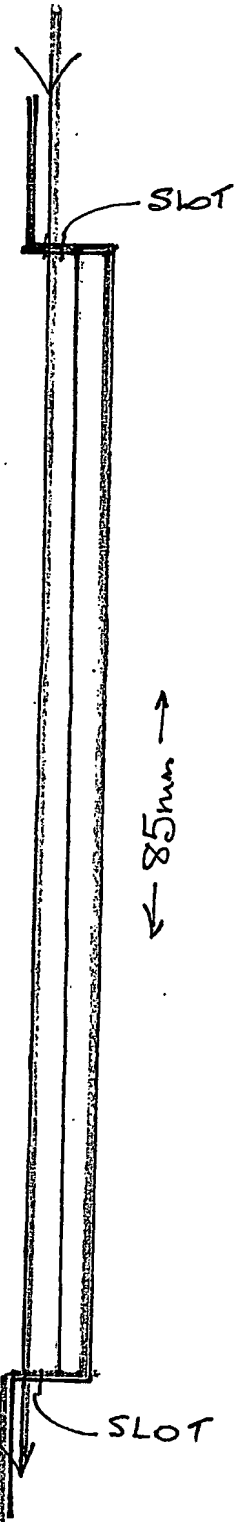
FRONT

\* FOLD OVER LOCKING STRIP (30mm WIDE) AND PIN

1100 mm  
← LOCKING STRIP →  
1150 mm



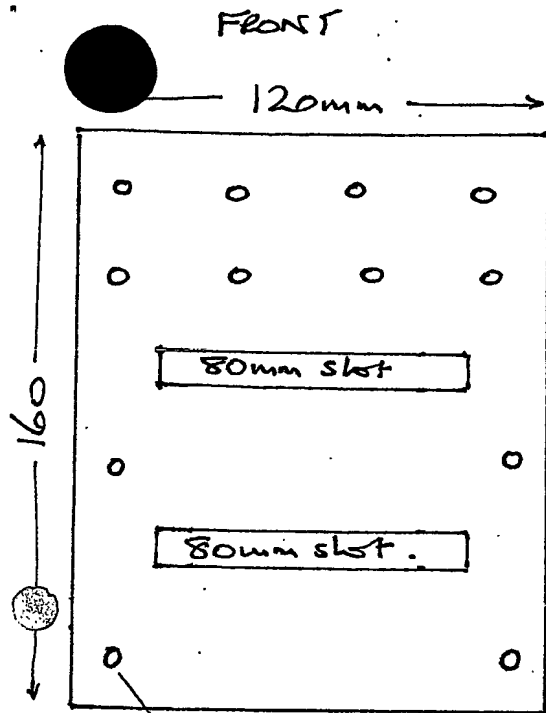
— BAND  
— LOCKING STRIP  
— STABILISER \*



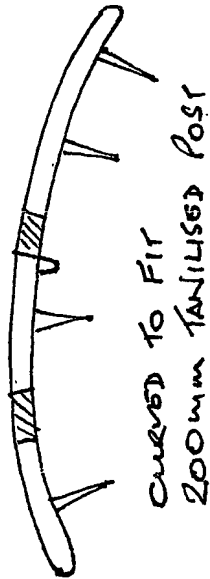
4 mm

85 mm

# END CLAMP

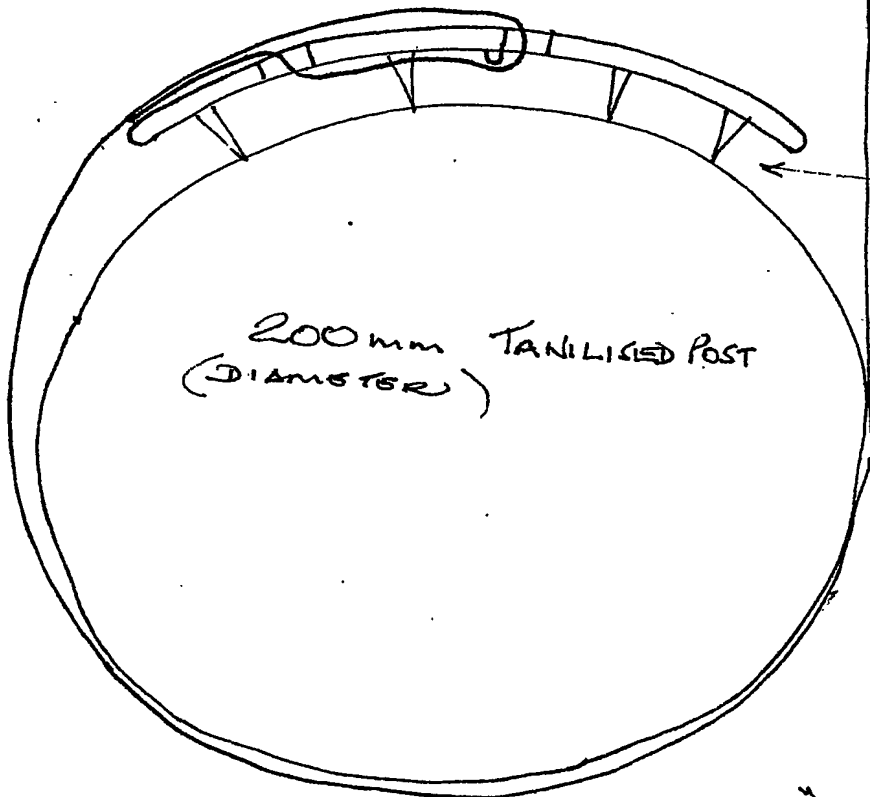


SIDE



GANG NAIL

BAND



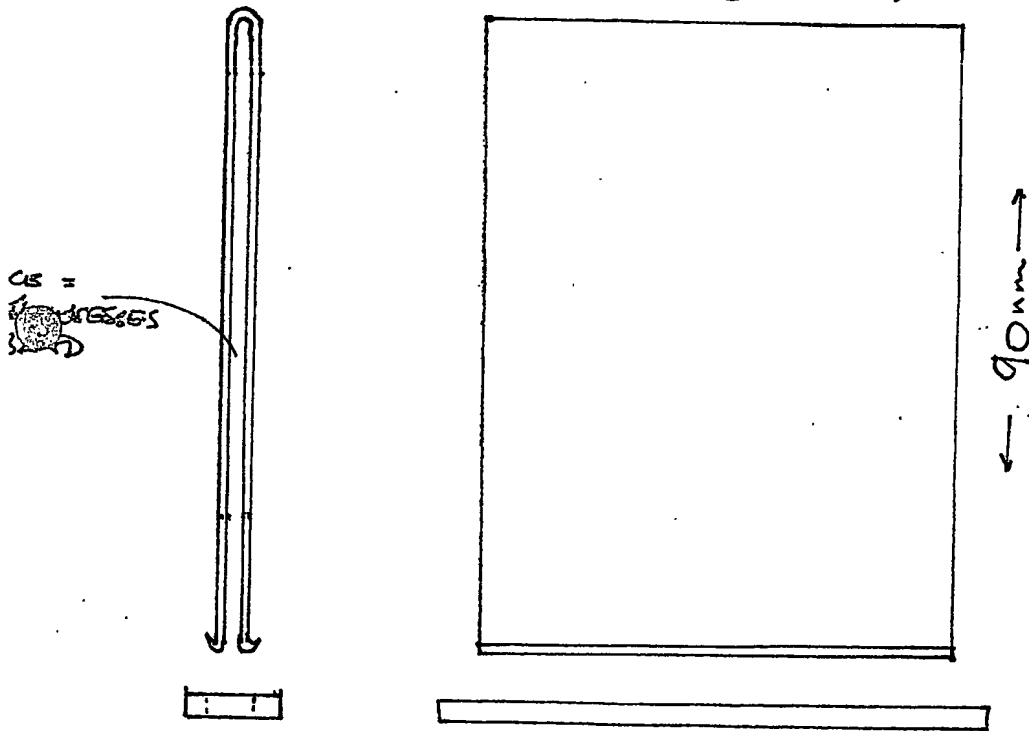
9/12

SMITH'S "VIA RAIL" BRANCH

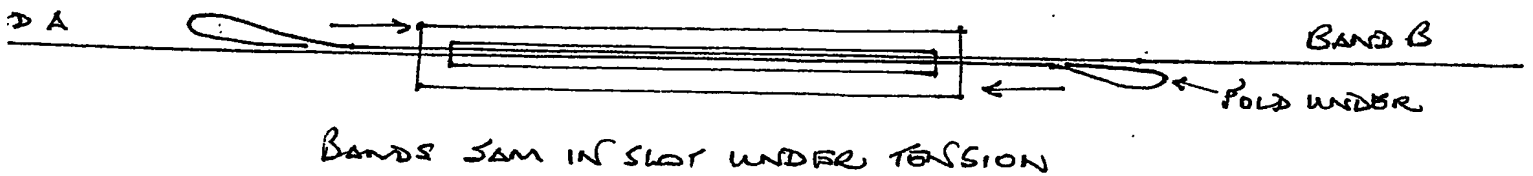
# JOINER

SIDE

FRONT



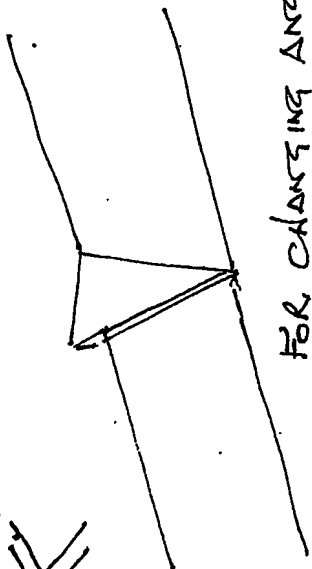
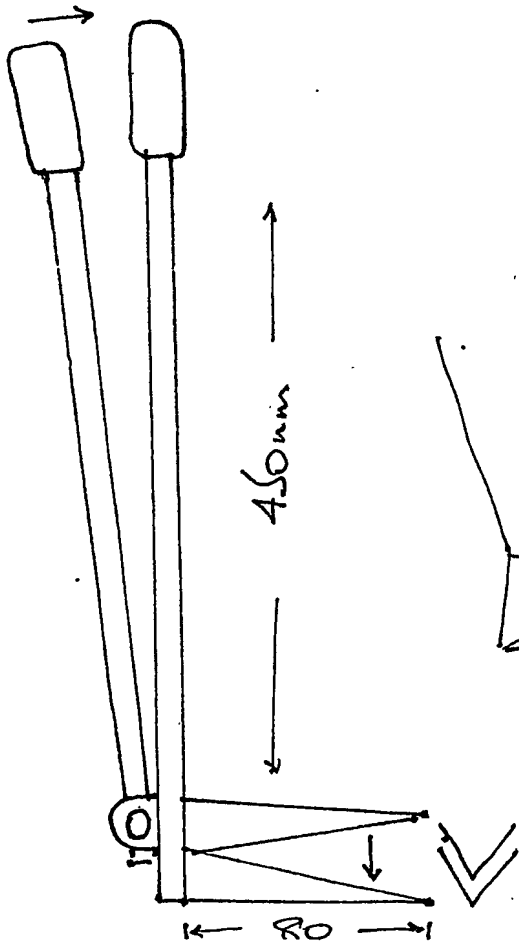
TOP



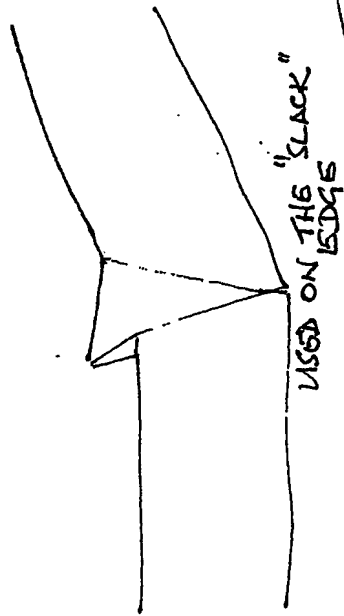
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SMITH'S "VISI-RAND" FENCE

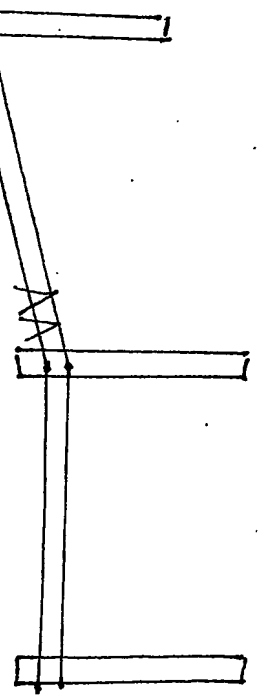
5" V CRIMP



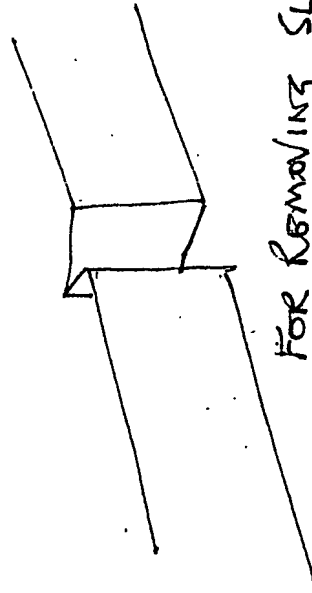
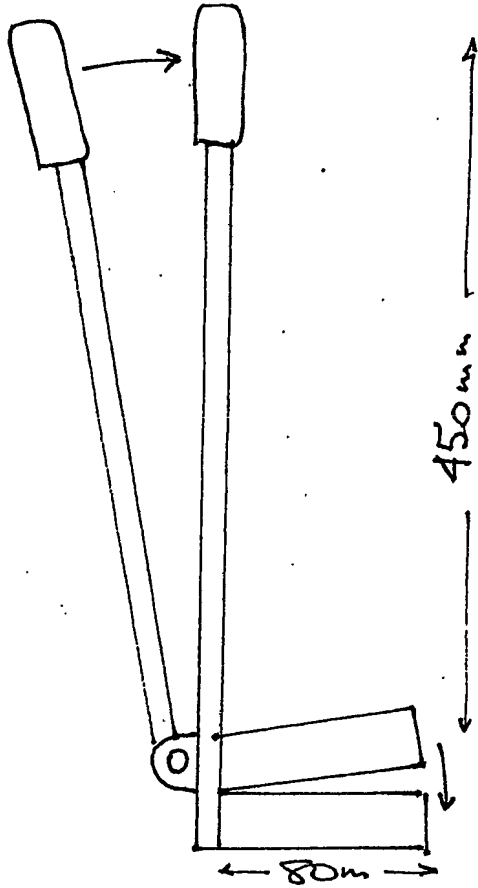
FOR CHANGING ANGLES



USED ON THE "SLACK" EDGES



PARALLEL CRIMP

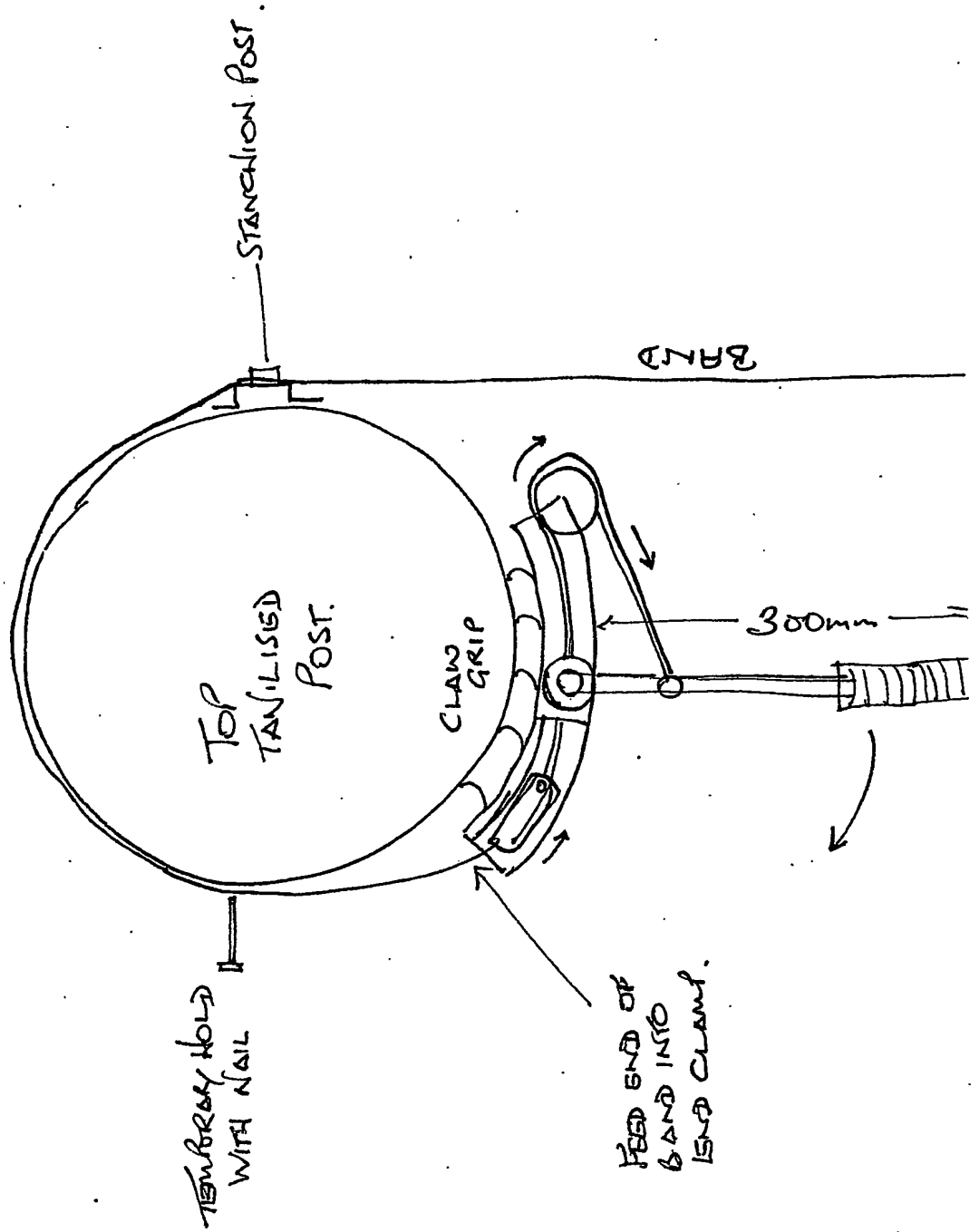


FOR REMOVING SLACK  
IN BANDS  
(DAMAGES REPAIR)

SMITH'S "VISI-BAND" FENCE  
2017/12/23

# Low Pressure Tensioner

PLAN



MITH'S "VISI-BAND" FENCER  
22/7/03

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